What is claimed is:

1. A purified microorganism comprising surface proteins and substantially intact nuclear components, wherein one or more surface proteins have been irreversibly modified such that the microorganism is thereby rendered non-pathogenic.

2. A purified microorganism comprising surface proteins and substantially intact nuclear components, wherein one or more surface proteins have been irreversibly modified by covalent attachment of a compound comprising one or more reactive functional groups to one or more reactive sites on said surface proteins, such that said microorganism is thereby rendered non-pathogenic.

3. The purified microorganism of claim 2, wherein the compound comprises a single reactive functional group.

4. The purified microorganism of claim 3, wherein the compound is selected from a group consisting of formaldehyde, acetaldehyde, paraformaldehyde, propionaldehyde, n-butyraldehyde, benzaldehyde, p-nitrobenzaldehyde, p-tolualdehyde, salicylaldehyde, phenylacetaldehyde, 2-methylpentanal, 3-methylpentanal and 4-methylpentanal.

5. The purified microorganism of claim 4, wherein the compound is paraformaldehyde.

6. The purified microorganism of claim 2, wherein the compound comprises two or more reactive functional groups.

7. The purified microorganism of claim 6, wherein the compound is a dialdehyde.

8. The purified microorganism of claim 7, wherein the dialdehyde is selected from the group consisting of glutaraldehyde, glyoxal, malondialdehyde, succinaldehyde, adipaldehyde and phthaldehyde.

9. The purified microorganism of claim 6, wherein the compound comprises at least one functional group from the group consisting of NHS imidate, maleimide, chloroacetyl, fluoroacetyl, iodoacetyl, bromoacetyl, amine, and hydrazide.

10. A purified microorganism comprising surface proteins and substantially intact nuclear components, wherein one or more surface proteins have been irreversibly modified by at least partial digestion by an enzyme, such that the microorganism is thereby rendered non-pathogenic.

11. The purified microorganism of ~~claim 10~~, where the enzyme is selected from a group consisting of bromelin, chymotrypsin, clostripain, collagenase, elastase, ficin, kallikrein, metalloendopeptidase, proteinase K, aminopeptidase M, carboxypeptidase Y, factor Xa, papain, chymopapain, pepsin, staphylococcus aureas protease (V-8 strain), trypsin and mixtures thereof.

12. A composition of matter comprising:
(a) a purified microorganism comprising surface proteins and intact nuclear components, wherein one or more surface proteins have been irreversibly modified such that the microorganism is thereby rendered non-pathogenic; and
(b) a liquid matrix.

13. The composition of claim 12, wherein the liquid matrix has been modified to render it suitable for lyophilization.

14. The purified microorganism of claim 1, wherein the microorganism is a virus.

15. The purified virus of claim 14, wherein the virus is chosen from the group consisting of human immunodeficiency virus, hepatitis C virus, hepatitis B virus, cytomegalovirus, human lymphotrophic virus, Epstein-Barr virus, parvovirus, herpes simplex virus, human herpes virus 8 and hepatitis A virus.

16. The purified microorganism of claim 1, wherein the microorganism is an intracellular parasite.

17. The purified intracellular parasite of claim 16, wherein the intracellular parasite is chosen from the group consisting of Chlamydia trachomatis, Chlamydia psittaci, Rickettsia prowazeki, Rickettsia typhi, Rickettsia rickettsi, Rickettsia sibtricus, Rickettsia conori, Rickettsia australis, Rickettsia akari, Rickettsia tsutsugamushi, Coxiella bumeti and Rochalimaea quintana.

18. A method for producing a non-pathogenic microorganism which comprises (a) providing a purified microorganism comprising surface proteins and intact nuclear components and (b) irreversibly modifying one or more surface proteins while leaving the nuclear components substantially unmodified, such that the microorganism is thereby rendered non-pathogenic.

19. The method of claim 18, wherein step (a) comprises covalently attaching a compound comprising one or more reactive functional groups to one or more reactive sites on said surface proteins

20. The method of claim 19, wherein the compound comprises a single reactive functional group.

21. The method of claim 20, wherein the compound is selected from a group consisting of formaldehyde, acetaldehyde, propionaldehyde, n-butyraldehyde, benzaldehyde, p-nitrobenzaldehyde, p-tolualdehyde, salicylaldehyde, phenylacetaldehyde, 2-methylpentanal, 3-methylpentanal and 4-methylpentanal.

22. The method of claim 20, wherein the compound comprises two or more reactive functional groups.

23. The method of claim 22, wherein the compound is paraformaldehyde.

24. The method of claim 23, wherein paraformaldehyde is used at a concentration of no more than 5%.

25. The method of claim 22, wherein the compound is a dialdehyde.

26. The method of claim 25, wherein the dialdehyde is selected from the group consisting of glutaraldehyde, glyoxal, malondialdehyde, succinaldehyde, adipaldehyde and phthaldehyde.

27. The method of claim 19, wherein the compound comprises at least one functional group from the group consisting of NHS imidate, maleimide, chloroacetyl, fluoroacetyl, iodoacetyl, bromoacetyl, amine, and hydrazide.

28. The method of claim 19, wherein step (a) comprises at least partial digestion of one or more surface proteins by an enzyme.

29. The method of claim 28, where the enzyme is selected from a group consisting of bromelin, chymotrypsin, clostripain, collagenase, elastase, ficin, kallikrein, metalloendopeptidase, proteinase K, aminopeptidase M, carboxypeptidase Y, factor Xa, papain, chymopapain, pepsin, staphylococcus aureaus protease (V-8 strain), trypsin and mixtures thereof.

30. The method of claim 19, wherein the microorganism is a virus.

31. The method claim 30, wherein the virus is chosen from the group consisting of human immunodeficiency virus, hepatitis C virus, hepatitis B virus, cytomegalovirus, human lymphotrophic virus, Epstein-Barr virus, parvovirus, herpes simplex virus, human herpes virus 8 and hepatitis A virus.

32. The method of claim 19, wherein the microorganism is an intracellular parasite.

33. The method of claim 32, wherein the parasite is chosen from the group consisting of Chlamydia trachomatis, Chlamydia psittaci, Rickettsia prowazeki, Rickettsia typhi, Rickettsia rickettsi, Rickettsia sibtricus, Rickettsia conori, Rickettsia australis, Rickettsia akari, Rickettsia tsutsugamushi, Coxiella bumeti and Rochalimaea quintana.

34. A method for detection of a microorganism comprising surface proteins in a biological sample by amplification of nuclear components of said microorganism, which method comprises addition of a purified control microorganism to the biological sample, wherein one or more surface proteins of said control microorganism have been irreversibly modified such that said control microorganism is thereby rendered non-pathogenic.

35. The method of claim 34, wherein the control microorganism has been irreversibly modified by covalently attaching a compound comprising one or more reactive functional groups to one or more reactive sites on said surface proteins.

36. The method of claim 35, wherein the compound comprises a single reactive functional group.

37. The method of claim 36, wherein the compound is selected from a group consisting of formaldehyde, acetaldehyde, propionaldehyde, n-butyraldehyde, benzaldehyde, p-nitrobenzaldehyde, p-tolualdehyde, salicylaldehyde, phenylacetaldehyde, 2-methylpentanal, 3-methylpentanal and 4-methylpentanal.

38. The method of claim 35, wherein the compound comprises two or more reactive functional groups.

39. The method of claim 38, wherein the compound is paraformaldehyde.

40. The method of claim 38, wherein the compound is a dialdehyde.

41. The method of claim 40, wherein the dialdehyde is selected from the group consisting of glutaraldehyde, glyoxal, malondialdehyde, succinaldehyde, adipaldehyde, and phthaldehyde.

42. The method of claim 36, wherein the compound comprises at least one functional group from the group consisting of NHS imidate, maleimide, chloroacetyl, fluoroacetyl, iodoacetyl, bromoacetyl, amine, and hydrazide.

43. The method of claim 34, wherein the control microorganism has been irreversibly modified by at least partial digestion of one or more said surface proteins by an enzyme.

44. The method of claim 43, wherein the enzyme is selected from a group consisting of bromelin, chymotrypsin, clostripain, collagenase, elastase, ficin, kallikrein, metalloendopeptidase, proteinase K, aminopeptidase M, carboxypeptidase Y, factor Xa, papain, chymopapain, pepsin, staphylococcus aureaus protease (V-8 strain), trypsin and mixtures thereof.

45. The method of claim 34, wherein the microorganism is a virus.

46. The method claim 45, wherein the virus is chosen from the group consisting of human immunodeficiency virus, hepatitis C virus, hepatitis B virus, cytomegalovirus, human lymphotrophic virus, Epstein-Barr virus, parvovirus, herpes simplex virus, human herpes virus 8 and hepatitis A virus.

47. The method of claim 34, wherein the microorganism is an intracellular parasite.

48. The method of claim 47, wherein the parasite is chosen from the group consisting of Chlamydia trachomatis, Chlamydia psittaci, Rickettsia prowazeki, Rickettsia typhi, Rickettsia rickettsi, Rickettsia sibtricus, Rickettsia conori, Rickettsia australis, Rickettsia akari, Rickettsia tsutsugamushi, Coxiella bumeti and Rochalimaea quintana.

49. A kit for analyzing a biological sample for the presence of a microorganism having surface proteins, wherein the kit comprises a positive control composition comprising a purified sample of said microorganism comprising surface proteins and intact nuclear components, wherein one or more surface proteins have been irreversibly modified such that the microorganism is thereby rendered non-pathogenic.

50. The kit of claim 49, wherein the surface proteins of the microorganism in said positive control composition has been irreversibly modified by covalently attaching a compound comprising one or more reactive functional groups to one or more reactive sites on said surface proteins.

51. The kit of claim 50, wherein the compound comprises a single reactive functional group.

52. The kit of claim 51, wherein the compound is selected from a group consisting of formaldehyde, acetaldehyde, propionaldehyde, n-butyraldehyde, benzaldehyde, p-nitrobenzaldehyde, p-tolualdehyde, salicylaldehyde, phenylacetaldehyde, 2-methylpentanal, 3-methylpentanal and 4-methylpentanal.

53. The kit of claim 51, wherein the compound comprises two or more reactive functional groups.

54. The kit of claim 53, wherein the compound is paraformaldehyde.

55. The kit of claim 53, wherein the compound is a dialdehyde.

56. The kit of claim 55, wherein the dialdehyde is selected from the group consisting of glutaraldehyde, glyoxal, malondialdehyde, succinaldehyde, adipaldehyde, and phthaldehyde.

57. The kit of claim 51, wherein the compound comprises at least one functional group from the group consisting of NHS imidate, maleimide, chloroacetyl, fluoroacetyl, iodoacetyl, bromoacetyl, amine, and hydrazide.

58. The kit of claim 50, wherein the surface proteins of the microorganism in said positive control composition have been irreversibly modified by at least partial digestion of one or more said surface proteins by an enzyme.

59. The kit of claim 59, wherein the enzyme is selected from a group consisting of bromelin, chymotrypsin, clostripain, collagenase, elastase, ficin, kallikrein, metalloendopeptidase, proteinase K, aminopeptidase M, carboxypeptidase Y, factor Xa, papain, chymopapain, pepsin, staphylococcus aureaus protease (V-8 strain), trypsin and mixtures thereof.

60. The kit of claim 50, wherein the microorganism is a virus.

61. The kit of claim 61, wherein the virus is chosen from the group consisting of human immunodeficiency virus, hepatitis C virus, hepatitis B virus, cytomegalovirus, human lymphotrophic virus, Epstein-Barr virus, parvovirus, herpes simplex virus, human herpes virus 8 and hepatitis A virus.

62. The kit of claim 50, wherein the microorganism is an intracellular parasite.

63. The kit of claim 64, wherein the parasite is chosen from the group consisting of Chlamydia trachomatis, Chlamydia psittaci, Rickettsia prowazeki, Rickettsia

typhi, Rickettsia rickettsi, Rickettsia sibtricus, Rickettsia conori, Rickettsia australis, Rickettsia akari, Rickettsia tsutsugamushi, Coxiella bumeti and Rochalimaea quintana.

64. A method for detection of a microorganism comprising surface proteins in a biological sample by nucleic acid amplification techniques, which method comprises coamplification of a positive internal control in the biological sample, wherein the positive internal control comprises the purified microorganism of claim 1.

65. A method for detection of a microorganism comprising surface proteins in a biological sample by nucleic acid amplification techniques, which method comprises coamplification of a positive internal control in the biological sample, wherein the positive internal control comprises the purified microorganism of claim 2.

66. A method for detection of a microorganism comprising surface proteins in a biological sample by nucleic acid amplification techniques, which method comprises coamplification of a positive internal control in the biological sample, wherein the positive internal control comprises the purified microorganism of claim 10.

67. A method for detecting a microorganism comprising surface proteins in a biological sample by amplification of nuclear components of said microorganism, which comprises (a) addition of the purified microorganism of claim 1 to a biological sample to be tested for the presence of a corresponding microorganism, (b) extracting target nucleic acid to be amplified, (c) amplifying target nucleic acid, and (d) detecting the amplified target nucleic acid.

68. A method for detecting a microorganism comprising surface proteins in a biological sample by amplification of nuclear components of said microorganism,

which comprises (a) addition of the purified microorganism of claim 2 to a biological sample to be tested for the presence of a corresponding microorganism, (b) extracting target nucleic acid to be amplified, (c) amplifying target nucleic acid, and (d) detecting the amplified target nucleic acid.

69. A method for detecting a microorganism comprising surface proteins in a biological sample by amplification of nuclear components of said microorganism, which comprises (a) addition of the purified microorganism of claim 10 to a biological sample to be tested for the presence of a corresponding microorganism, (b) extracting target nucleic acid to be amplified, (c) amplifying target nucleic acid, and (d) detecting the amplified target nucleic acid.